The Thermaleer

SAM 600 of Australia Newsletter Issue No.146 July - September, 2018

Winners in Electric ½A Texaco at Echuca 16th September 2018.
L to R: Max Heap 3rd, Graeme Gulbin 1st and Ted Arnett 2nd.
Because of the bad weather forecast for Saturday the comp was reduced to a one day comp on Sunday, when weather was fine but cold conditions with a gusty, icy wind.

NEXT COMPETITONS

November 10th & 11th	**COHUNA** Saturday: 1/2A Texaco, Duration, Burford Sunday: Texaco, 38 Antique (Climb & Glide)
November 25th	**BALLARAT (new field)** 1/2A Texaco, Climb & Glide, Texaco

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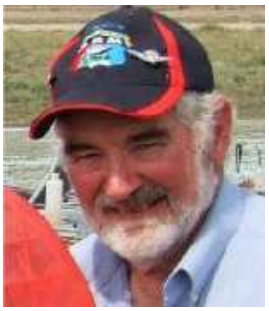

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"The Thermaleer" is the official newsletter of SAM 600 of Australia, Victorian R/C Old Timers Association (SAM600) Inc.

Electric Duration winners at Echuca Oldtimer 1st Kevin Fryer with his Cumulus and 2nd Graeme Gulbin with his new Playboy.

VALE BARRY BARTON

It with a sad heart that I have been notified by Emm Barton that our long time friend and colleague Barry Barton has passed away at the age of 84.

Barry was a very active member of SAM600 since as far back as I can recall. He was a fierce competitor, an excellent builder and a very good flier.

There were not many competitions he did not attend and was always in the top three placings, until about six years ago, when his enthusiasm started to wane in favour of his musical interests.

You could always pick Barry on the flying field as he always wore bib and brace overalls, sandals, always red socks when he wore socks, and a hat that had cover for his neck and face and if there were flies around he could pull down a special fly net over his face.

To the best of my memory Barry was instrumental in introducing the Stardust Special design model to Victoria, if not Australia, for the 1/2A comp and it has been mentioned, on more than one occasion, that it should be called the Bum Hole not Stardust as everybody has one now, so he really started an Australia wide trend.

Barry was also Secretary of SAM600 for some time and did a very good job.

I believe he has kept in touch with our members through phone calls and he would sometimes attend the Roy Rob at P& DARCS for a look and a chat with old friends.

I'm sure all who knew him will be very saddened by this news though we believe he led a very full and satisfying life.

The photos herewith are mostly self-explanatory except the one with the young lady in it. She is Barry and Emm's daughter who came down to give her father some support at a comp at the SWAMP'S field.

RIP Barry.

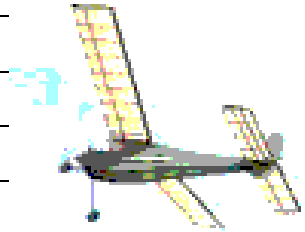
Kevin Fryer.

SAM 600 President.

"The Stebbings Memorial" Champ of Champs - 2018

Event	1st Place	2nd Place	3rd Place	Number In Fly Off
ROY ROBERTSON 28th JANUARY, 2018 - CANCELLED				
ECHUCA 17th-18th March - Re-Scheduled to 21st-22nd April 2018.				
ECHUCA 21st-22nd April, 2018				
1/2A Texaco	Lyn Clifford	Kevin Fryer	Pat Keely	3
Electric 1/2A Texaco	Graeme Gulbin	Kevin Fryer	Gavin Dunn	5
Duration	Pat Keely	Robert Taylor	Lyn Clifford	3
Electric Duration	Kevin Fryer	Gavin Dunn		2
Burford	Kevin Fryer	Lyn Clifford		2
Texaco	Kevin Fryer	Robert Taylor	Lyn Clifford	5
Electric Texaco	Lyn Clifford	Gavin Dunn		2
'38 Antique	D N F			
VIC/SA State Champs 5th-6th May, 2018				
1/2A Texaco	Lyn Clifford	Brian Laughton	Max Heap	4
Electric 1/2A Texaco	Steve Jenkinson	Graeme Gulbin	Brian Laughton	5
Burford	Brian Laughton	Steve Jenkinson	Lyn Clifford	3
Duration	Lyn Clifford	Steve Jenkinson	Max Heap	2
Electric Duration	Brian Laughton	Gavin Dunn		2
Texaco	Steven Gullock	Graeme Gulbin	Robert Taylor	4
Electric Texaco	Max Heap	Steve Gullock	Lyn Clifford	4
'38 Antique	Steve Jenkinson	Lyn Clifford	Robert Taylor	1
BALLARAT 19th-20th May, 2018				
1/2A Texaco	Kevin Fryer	Brian Laughton		2
Electric 1/2A Texaco	Graeme Gulbin	Kevin Fryer	Brian Laughton	6
Duration	Brian Laughton	Kevin Fryer	Steven Gullock	3
Electric Duration	Kevin Fryer	Brian Laughton		2
Burford	Kevin Fryer	Steven Gullock		2
Texaco	Steven Gullock			0
Electric Texaco	D N F			
'38 Antique	D N F			

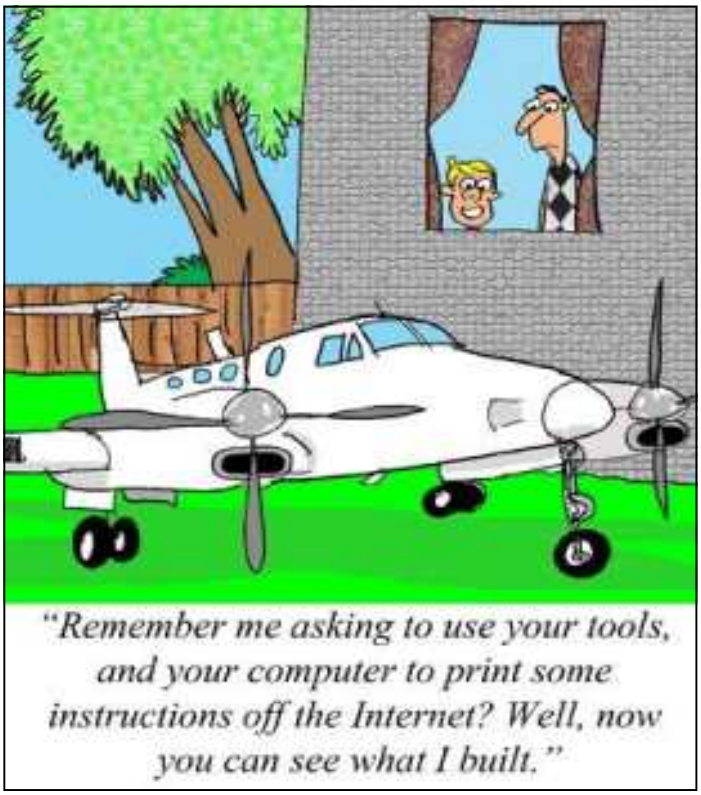
PROGRESSIVE POINTS I/C		
Kevin Fryer	30	1st
Lyn Clifford	25	2nd
Pat Keely	16	3rd
Brian Laughton	14	4th
Steve Gullock	13	5th
Steve Jenkinson	10	6th
Graeme Gulbin	10	6th
Robert Taylor	9	7th
Max Heap	6	8th



PROGRESSIVE POINTS ELECTRIC		
Kevin Fryer	22	1st
Graeme Gulbin	18	2nd
Gavin Dunn	13	3rd
Max Heap	12	4th
Brian Laughton	11	5th
Lyn Clifford	6	6th
Ted Arnup	5	7th
Steve Gullock	4	8th
Steve Jenkinson	4	8th

"The Stebbing Memorial"
Champ of Champs 2018
continued

Event	1st Place	2nd Place	3rd Place	Number In Fly Off
ECHUCA 15th-16th September, 2018				
½A Texaco	Kevin Fryer	Pat Keely		1
Electric ½A Texaco	Graeme Gulbin	Ted Arnut	Max Heap	6
Duration	Pat Keely	Max Heap	Steve Gullock	2
Electric Duration	Kevin Fryer	Graeme Gulbin		2
Burford		DNF		
Texaco	Kevin Fryer	Steve Gullock	Robert Taylor	3
Electric Texaco	Max Heap	Kevin Fryer		2
'38 Antique		DNF		



"Remember me asking to use your tools, and your computer to print some instructions off the Internet? Well, now you can see what I built."

The biggest lie I tell myself is "I don't need to write that down, I'll remember it."

The Woodstock Glider, VH-IKL, currently housed at the Australian Gliding Museum at Parwan, Vic. And currently being modelled by a prominent SAM

At the 2018 Eastern States Gas Champs, Wangaratta, Steve Gullock and his faithful hound prepares to enjoy a steak sandwich during the lunch break. According to a report received from the photographer The Victorian gang had great fun over the weekend.

FOR OLD TIMER'S SAKE

By Don Howie.

I currently fly a lot of diesel powered models, even though electric seems to be taking over, as it is so much easier and cleaner. The model seen flying is an old kit by "Airsail" in New Zealand, the 48inch span "Heron", designed by Nick Limber and published in Flying Aces, December, 1939.

Nick called this model a "Gas Buggy", I suspect for fun flying and his first popular published design was the 60inch span "Debby" in Flying Aces, July 1939, that flew very well with the popular Bunch petrol (gas) engines of this era. Another popular design by Nick Limber was the "Mickey Rooney Special" after the young film actor, who also flew petrol powered model aircraft. This was published in the popular "Mechanix Illustrated" magazine during 1941.

We gave the Heron a quick test in the western parklands of Adelaide, powered with a recently finished A.H.C. diesel by Maris Dislers, who still teaches me much about operation of small diesels. I started with a Frog 100 in 1949, then an Elfin 1.8cc in 1950, and continued till mid nineteen sixties with diesels (1.5cc Taipan) in my O/D single channel designs. In 1968, with the introduction of the Kraft Gold Medal series proportional (full house) radios, that were now 100% reliable, I then went to .60 size R/C glo engines, for the next 10 years.

I was given the re-drawn plan of the 60inch span Frog "Centurion" kit, released in the U.K. in 1948, for the new Frog 180 (1.66cc) diesel, by Peter Lloyd in Victoria. I have a 1948 Frog 180 diesel that runs nicely inverted, and at the time of writing, about to fit it to the model shown.

The model was built for me by Jack Simmons, who only builds electric powered these days. It has a Park 480 motor of 1020KVA, with 30amp speed controller turning an old Pepperell 10x4 standard wooden prop made in New Zealand, early nineteen fifties. The prop was not balanced and required considerable wood to be taken from one blade, now varnished, and runs smoothly. The model needed 2ounces of lead in the balsa cowl at the front to balance in front of the main spar, it goes very well with 3 cell lipo pack of 2200mah.

Jack Simmons is interested in our Vintage Glider contests, so recently re-covered his 100inch span "Gamma Gull" with Hobby King iron-on covering. The original at 72inch span, designed by Gordon Rae in the U.K., won an event at the British Nats F/F in 1949. An enlarged version for R/C was published in the nineteen seventies.

The model is fairly hard to turn with rudder, so Jack has increased the rudder size. We are not too fussy in S.A. and Bill Britcher has fitted coupled ailerons to his model, which is allowed over here.

Early American Diesels.

This is dedicated to Bob Angel of SAM 26 in the U.S.A., hoping we can help him get his diesels to start and run. I must admit I do not use diesels in cold, wet weather, but California having similar weather to South Australia, where I live, they should and do work well in Summer and Autumn weather when it is warm and dry.

A poor diesel, tested in September, 2017 Aeromodeller, was the PMC IMP 0.6cc diesel that nobody could start, except Maris Dislers, it being a very loose fit in the cylinder. Maris got it to start on 50% castor oil, 30% ether and 20% kerosene. It is not the ether that gets it to start, but rather the castor oil or thick mineral oil. Maris states that you should never need more than 30% ether in the fuel. Remember, this is hand starting, not using electric starters. Castor gums things up, so last run should be fuel with mineral oil or synthetic oil, start the engine while it is still warm.

48 inch Heron (Gas Buggy) flying in Adelaide West Parklands. Has American A.H.C. diesel up front.

Maris Dislers holds "Heron" with A.H.C. diesel. He finished piston and contra-piston made world's top engine writer (tester) at present time Aero Modeller.

1948 Frog "Centurion" design by Charles Buffery. 60 inch span kit in U.K. designed for Frog 180 diesel, electric at present but shortly to be fitted with 1948 Frog 180 diesel by Don Howie.

1949 "Gamma Gul" at 100 inch span, electric, by Jack Simmons, who also built the Frog Centurion, shown in previous picture.

I was getting first flick starts with the C.I.E. Hy-Pro .147 diesel recently, a great early American diesel from 1946 owned by Bill Britcher. Once the spray bar hole was fitted in the centre of the intake and the compression stops fitted in the correct position.

Results were: 10½x5 Bolly Clubman prop - 6,500 rpm
10x6 Brown Graupner prop - 6,600 rpm
10x4 APC prop - 7,100 rpm

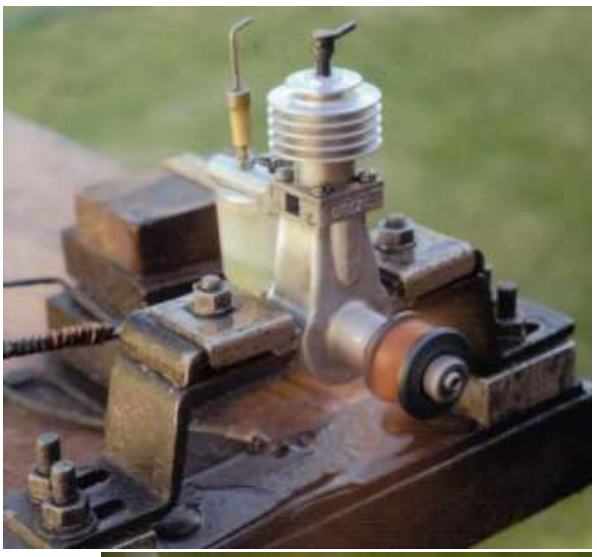
Next was the Deezil "A" from 1948, produced by Gotham Hobby Centre in New York. When first introduced at US$11.95 it was a nice running engine, but like the G.H.Q. it got worse and badly made, so most did not run. The .125 cubic inch (2cc) engine made by Gordon Burford in Australia, runs like the first engines in 1948 and has a clear fuel tank fitted. The engine is shown running on a 10x6 Graupner Brown prop, turning this at 6,000 rpm. Not as good as the C.I.E., but the Compression Ignition Engine is a larger capacity.

Next we come to the A.H.C. diesel from 1947 at .125 cubic inch (2cc) from America's Hobby Centre (previously G.H.Q) in New York. A thousand castings for the case was made, which included the solid small intake. They took them out of the die to early and the intake was bent. One could not drill the intake hole if it was bent, so the engine was not produced. Several engines have been made from good castings and Maris Dislers was sent one that he finished with a new piston and contra-piston.

Results were: 10x6 APC prop - 5,300 rpm
10x4 APC prop - 6,200 rpm
9x4 APC prop - 7,500 rpm

Mystery engine shown, we think it is the proto-type Syncro Ace with radial mounting, looks like it was flown in a model about 1937.

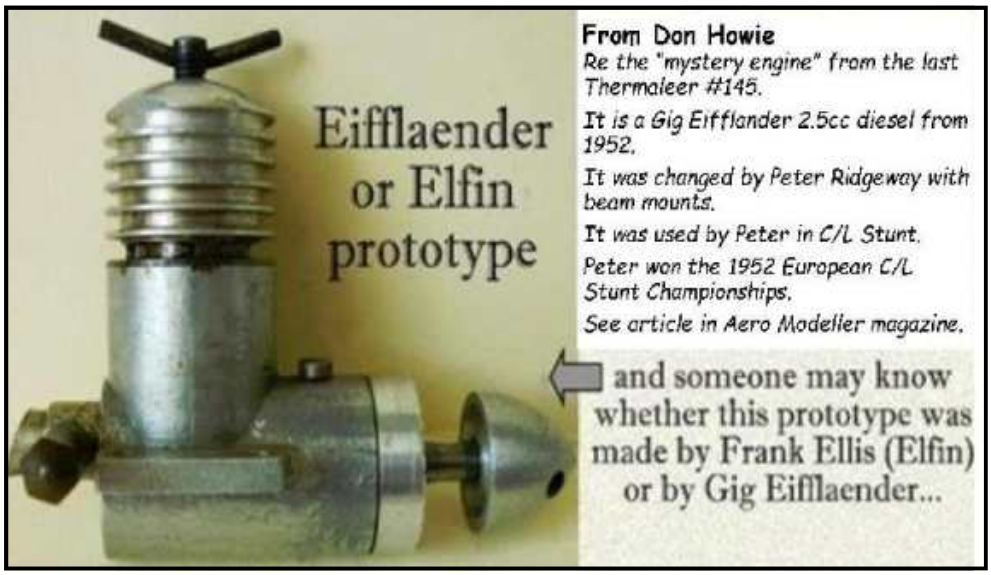
C.I.E. diesel, 2.4cc, from Modelcraft, California. 1947 model by Hy-Pro, Barney Snyder Company.

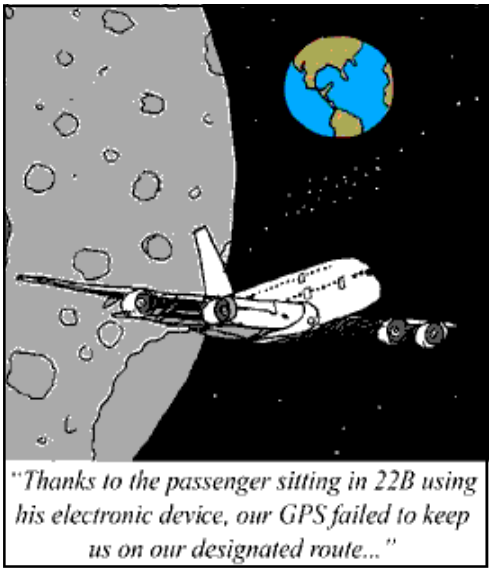


Above Right: ***Gordon Burford made 2cc "Deezil" (copy of original from 1948). Starts and runs easily. Engine owned by Bill Britcher.***

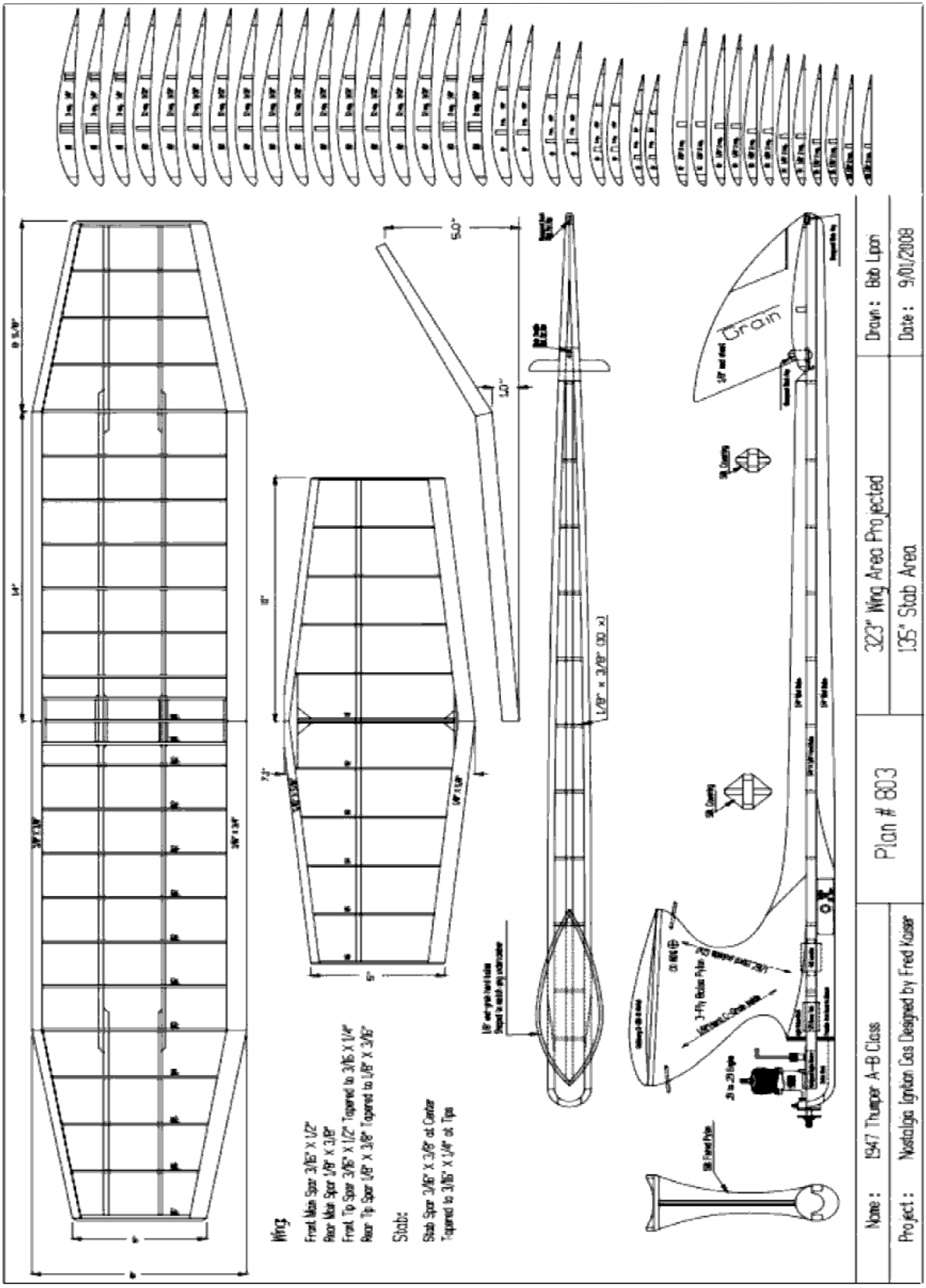
Right: ***1947 A.H.C. diesel (New York). Never produced. This one runs!***

Left: ***Mystery Engine. Suspect it was made by John L. Doll who was an aeronautical engineer. He designed the early "Syncro" engines. Radial mounting shown.***






Super Cyclone .64
Model G
(pre-war)
Super Cyclone .60
Model GR
(post-war)
BC


Wing
Front Main Spar 3/16" X 1/2"
Rear Main Spar 1/8" X 3/8"
Front Tip Spar 3/16" X 1/2" Tapered to 3/16 X 1/4"
Rear Tip Spar 1/8" X 3/8" Tapered to 1/8" X 3/16"
Stab:
Stab Spar 3/16" X 3/8" at Center
Tapered to 3/16" X 1/4" at Tips
Grain
Name : 1947 Thumper A-B Class
Project : Nostalgia Ignition Cox Designed by Fred Kaiser
Plan # 803
323" Wing Area Projected
135" Stab Area
Drawn : Bob Lipon
Date : 9/01/2008

Thumpers from the past.

ECHUCA OLDTIMER 15th-16th SEPTEMBER, 2018.

Report from CD Don Grant. **Photos from Graeme Gulbin**

Echuca 16th September. Because of the bad weather forecast on Saturday the comp was reduced to a one day comp on Sunday. Nine members attended with Don Grant not flying but being CD for the day. The day started with the Annual General Meeting and all office bearers being returned. Flying started after the meeting in fine but cold conditions with a gusty, icy wind and little good lift.

Texaco: ½A Texaco was first with two in I.C and 6 in electric. Kevin Fryer won I.C as he was the only one to get two maxes. Despite an engine change Pat Keely was unable to get an engine running well enough to make the fly-off.

Electric was a different matter with all flyers making the flyoff. In the flyoff Robin Yates wasn't able to control his model under power and slammed into the underside of the new shelters' roof. Graeme Gulbin, the Electric ½A king, won again with Ted Arnup second and Max Heap third.

Texaco had four flyers, Pat Keely was unable to get his motor running again and with Robert Taylor also having engine trouble and not making the flyoff, which left Kevin Fryer and Steve Gullock in the flyoff with Kevin winning.

Duration: Due to low entries and the lateness of the day both I.C. and Electric were flown with one round only. In I.C. Pat Keely was able to get an engine running and came first, Max Heap second and Steve Gullock not flying.

In Electric Kevin Fryer was first and Graeme Gulbin second with a yet to be sorted Playboy.

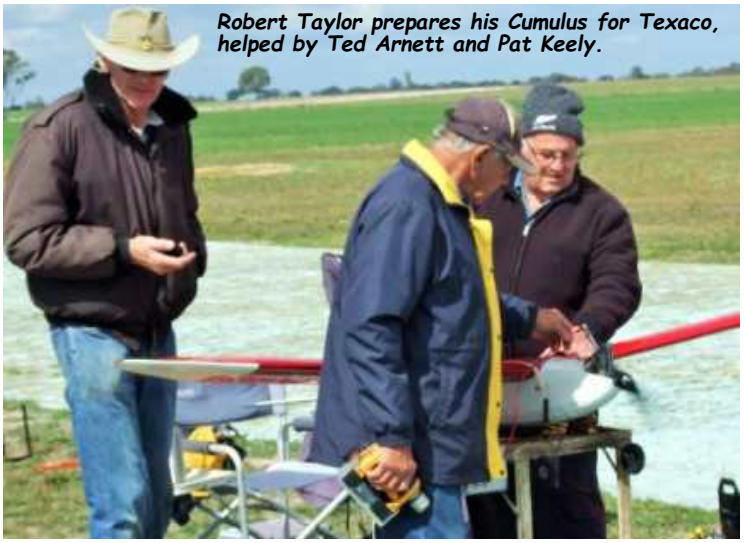
Altogether a disappointing comp due to lack of numbers and the continuing problem of fitting in flights with members flying both electric and I.C.

Cheers, Don Grant.

Texaco flight line at Echuca

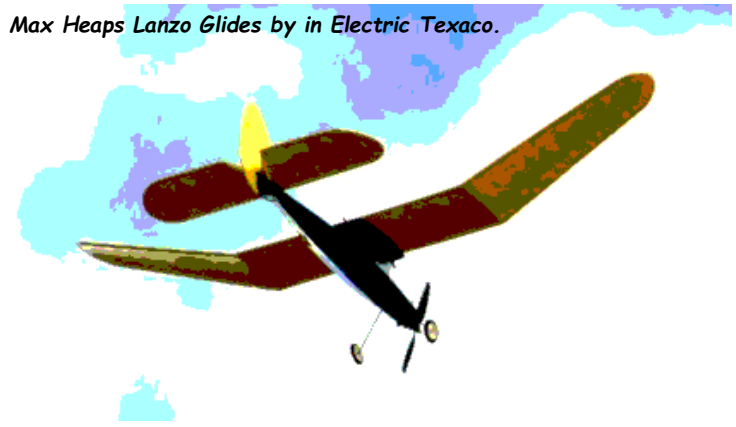

Kevin Fryer prepares his Cox 1/2 Texaco.
Don Grant is timer.


Steve Gullock takes off for Texaco.


Robert Taylor prepares his Cumulus for Texaco, helped by Ted Arnett and Pat Keely.


Robert Taylor's Cumulus lift-off for Texaco.


Steve Gullock Lanzo coming home in 2nd place for Texaco.


Max Heaps Lanzo Glides by in Electric Texaco.


Smooth lift off by Kevin Fryer for Electric Texaco.


Robert Taylor climbs out in Texaco.

ECHUCA 16th SEPTEMBER, 2018.
Results for IC Engines

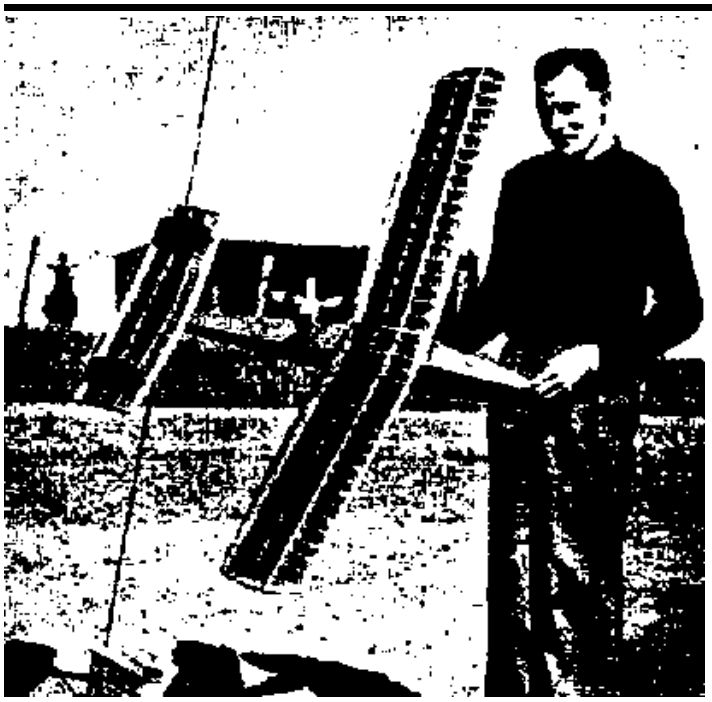
	Name	Model	Engine	CC/Sec	Rd 1	Rd 2	Rd 3	Rd 4	F/O	TOTAL
1/2A TEXACO										
1	Kevin Fryer	Challenger	Cox		420	420				840
2	Pat Keely	Stardust	Cox		191					191
TEXACO										
1	Kevin Fryer	Cumulus	Forster 99	24	600	600			536	1736
2	Steve Gullock	Bomber	Enya 53	15	600	600			488	1688
3	Robert Taylor	Cumulus	OS 61	18	478	600	538			1138
4	Pat Keely	Airborne	OS 60	15	OUT					
DURATION										
1	Pat Keely	Bomber	OS 56	32					927	927
2	Max Heap	Bomber	GMS 32	25					287	287
3	St Gullock	Bomber	Enya 40	25					DNF	

ECHUCA 16th SEPTEMBER, 2018.
Results for Electric Power

	Name	Model		CC/Sec	Rd 1	Rd 2	Rd 3	Rd 4	F/O	TOTAL
ELECTRIC ½A TEXACO										
1	Graeme Gulbin	Stardust			600	600			1057	2257
2	Ted Arnup	Stardust			600	600			959	2159
3	Max Heap	Stardust			600	600			933	2133
4	Kevin Fryer	Atomiser			565	600	600		793	1993
5	Steve Gullock	D.K. Diamond			600	600			295	1495
6	Robin Yates	Bomber			600	600			OUT	1200
ELECTRIC TEXACO										
1	Max Heap	Bomber			600	600			1056	2256
2	Kevin Fryer	Bomber			600	600			1034	1234
ELECTRIC DURATION										
1	Kevin Fryer	Cumulus		25					346	346
2	Graeme Gulbin	Playboy		25					270	270

Below: *IC Texaco 1st Kevin Fryer with his Cumulus powered by a Forster 99 on spark and 2nd Steve Gullock with his Lanzo Bomber powered by an Enya 53 four stroke. Robert Taylor 3rd not present.*

Above: *Electric Texaco 1st Max Heap and 2nd Kevin Fryer with their Lanzo Bombers*



The R6-B.

A 5 feet span Functional Radio Control design for motors from 1.3 c.c. to 2.5 c.c.

By Allan Rowe

Frank Bethwaite, a New Zealand airline pilot, well-known to all aeromodellers as the holder of the World Radio Control Sailplane Record, was recently in Melbourne Australia, where he impressed the Aussie modellers with this R6-B borrowed from Les Wright for the occasion.
Note the authentic touch provided by the "Digger" on horseback in the background.

From AEROMODELLER - March 1955

Model for 2019 Oily Hand Weekend, Cowra 23-24-25 August, 2019

The R6-B.

The most popular model design, flown by the majority of New Zealanders is Allan Rowe's R6-B., or variants thereof.

Main feature is the mounting of the motor above and behind the trailing edge of the wing. The

advantages of such a setup we leave to Allan himself to explain in the article that follows, and state without hesitation that it is the most intelligent and practical approach to radio-control model design that we have yet seen.

Over to Allan then:-

This ship, Mark 2 of a sixth series of R/C designs, was built around the new' H.M.V. radio-control equipment and was intended as a general purpose and unashamedly functional aeroplane. It will do everything required of a single control R/C model. It will fly sedately and with precision - it will penetrate in gusty conditions - at ground level it will give precise control-line type stunting - with more altitude and a bigger motor it will do every aerobatic manoeuvre required, including consecutive barrel rolls - it will outmanoeuvre conventional ships in R/C combat flying - it will not break propellors - it will not get messy with oil from the exhaust - it cannot stall under power. It is an excellent beginner's model and yet a spectacular expert's model - and if any English Aeromodeller has his doubts, I'm prepared to come over with the original model and prove it - (provided he pays my fare!).

I have no hesitation in stating these facts because I think it reasonable that any aeroplane designed without left over free flight inhibitions and specifically for general purpose radio-controlled flying, should have this performance. I do not claim that R6-B is the answer to such a specification but it is one answer that has proved successful and as such will perhaps serve to stimulate others to get out of the rut worn by our free-flight ancestors.

In the design stage, the whole conception of a satisfactory aeroplane centred around the need for utterly reliable radio equipment without which the more spectacular varieties of flying could not be attempted.

This was provided by the new H.M.V. gear which after six months of hard concentrated flying has not yet been inspected since its original installation in the model. The only servicing it has received has been the replacement of batteries as required and the winding of the "Relaytor" rubber. The model, now six months old, has been in the air every week-end as well as frequently during lunch hours and in the evenings after work.

The need for a strictly functional machine, simple of construction, repair and maintenance influenced amongst other things the placing of the motor and the absence of conventional undercarriage.

It seemed both an unnecessary and expensive bow to convention to place a valuable engine in the nose which is normally the point of impact in the event of pilot miscalculation. Furthermore, such a position apart from ensuring an aeroplane continually messy with exhaust oil, precluded the use of a highly efficient airscrew (paper-thin highly polished blades are hard work and break easily), increased fuselage drag due to slip-stream velocity, introduced undesirable twisting forces requiring critical thrust-line adjustments and prevented a clean entry' at the most aerodynamically important point of the fuselage. Possible alternative placings for the motor included the rear of the fuselage and the top of the fin, but the arrangement shown was finally adopted. Specifically, the advantages of this engine position in actual practice are:

1. The angle at which the motor is set is immaterial because the slipstream has no intruding surface on which to react. Hence no critical adjustment of thrust-line is required and it is sufficient to line up the motor by eye.
2. All exhaust oil is blown clear of the model passing

over the tailplane and between the fins. As a result, the model lands in a perfectly clean condition after 30-40 minute flights.

3. Because the slipstream does not have to create drag pushing past obstacles such as wings, fuselage, engine, etc., all the available thrust is used for its proper purpose. Consequently, big results are obtained with small capacity engines with a resultant economy of operation. When several hours flying are packed into each afternoon outing, this question of fuel consumption becomes a very real consideration and the efficient use of a small capacity engine is a useful contribution to overall economy.

As most of our flying in this country is carried out rom rough fields, the only justification for the retention of a conventional undercarriage has been its value (doubtful) as a propellor protector on landing. The skid finally adopted for R6-B fulfils its function as a landing device but its replacement by a bicycle undercarriage with wheels inset and the rear wheel say ½" forward of the C.G. would permit take-off from reasonable ground.

R6-B was originally flown with an inverted Mills 1.3 (thinned and polished narrow' blade 9" x 4") fitted with a 20 minute streamlined tank.

In this form and with moderate rudder movement precision manoeuvres may be carried out with flat skidding turns.

With the same motor, but with maximum rudder deflection, the model becomes moderately' aerobatic, instantaneous control response (and recovery) permitting "ground attack" methods with perfect safety particularly in view of the model's non-stall characteristic. In this trim tight turns as low as 3-4 feet from the ground may be safely performed by the key blipping method (microswitch essential) and recoveries from wing overs at the same height are also O.K. in reasonable weather. In this trim also, the model has quite a useful rate of climb and can be used for combat flying or just flying for fun - thermal hunting for the free-flight boys, cloud chasing, etc. The model's biggest advantage in combat flying is its ability to "hang on the prop" in a vertical climb and gradually ease off to its regular climb angle without any stall as speed diminishes to normal. Thus from a position alongside an opponent a peel off and climb under his tail is possible without any penalty of lost flying speed.

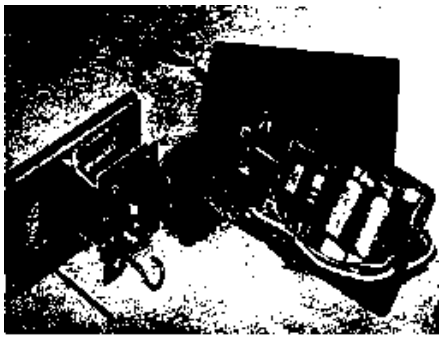
With full rudder deflection and fitted with an inverted gravity' fed FROG 250 (thinned and polished wide blade 10x7), the model is fast, with a rapid rate of climb and is highly aerobatic. For continuous aerobatics a model must combine a rapid rate of climb with a clean plunging spiral dive which initiates immediately control is applied and is as near a straight vertical plunge as possible. A tight fluttering spiral or a slow' developing spiral is useless. R6-B combines these desired characteristics and as the gravity fed FROG runs steadily in all positions, smooth non-stop aerobatics are possible. A dive of approximately 100-150 feet gives sufficient speed for consecutive barrel rolls but one turn of spiral dive is usually sufficient for all other manoeuvres possible by remote control. Combat flying is this trim is not recommended in view of the increased collision risk due to greater speed and the violent effects of momentary over control, but if you like it that way - well go to it.

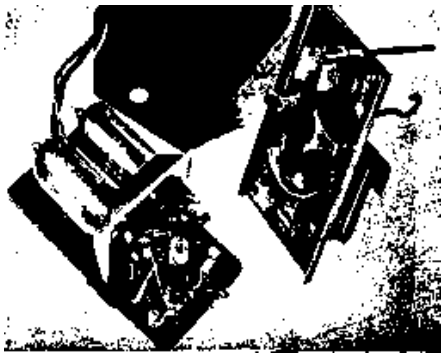
See Zaic Yearbook 1955-56 Pages 8-15.

FROM ZOTOZ: Before you get to far into what engine and the building of your R6-B, let me pre-empt that there will be an event for this model at the 2019 Oily Hand.

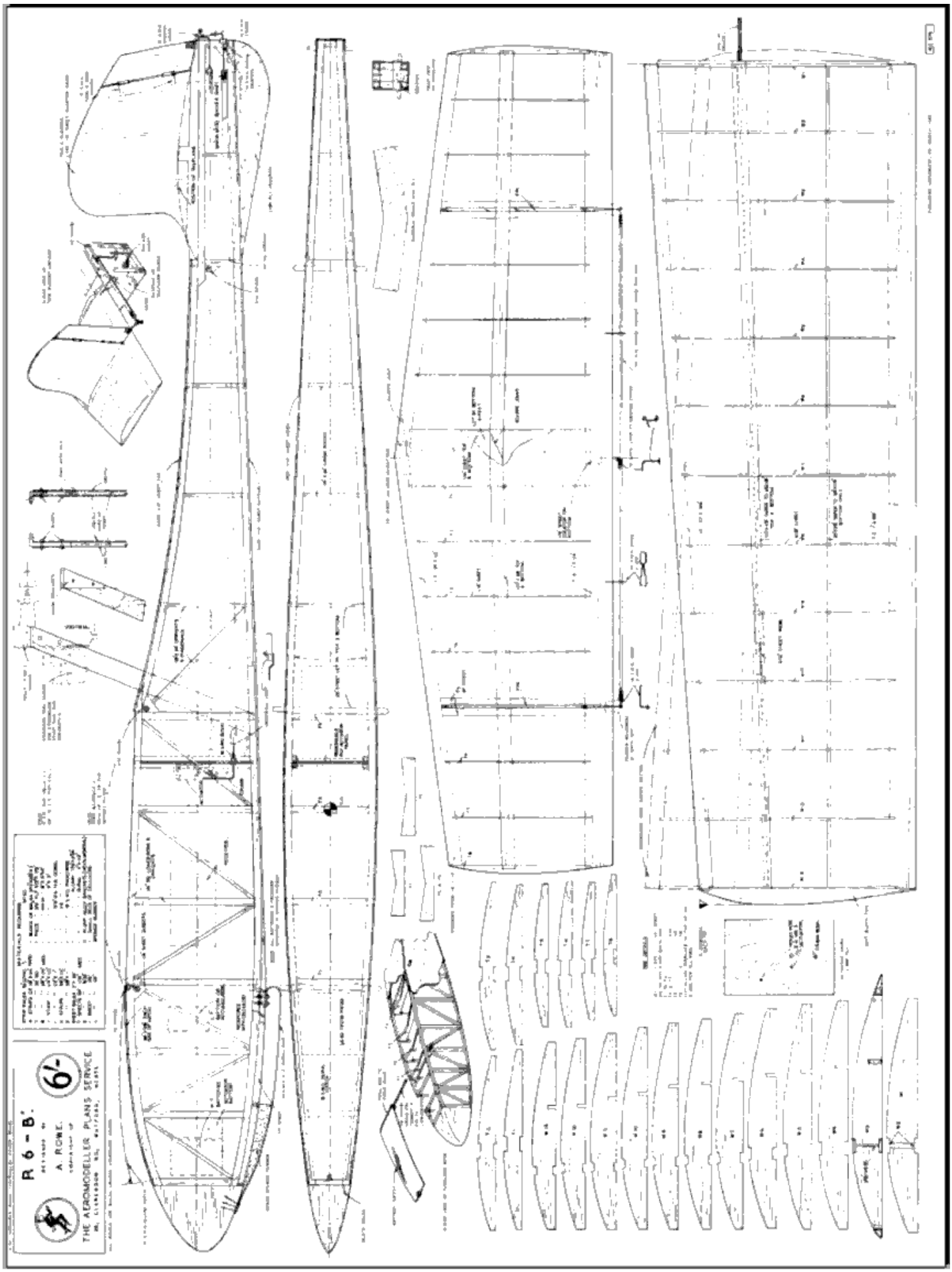
The details aren't finalised yet, but it will involve a timed glide. You will need to be able to shut the engine off after a specified time.

So build in an engine shut off of some description.
Andy





Pictures show the Receiver removed from its protective case, and the Relaytor. The valve bracket provides a friction fit in the case, the hole in the latter giving access to the tuning slug. Note the neat panel layout of the receiver, the transformer being inset, and the valves fully protected through being laid horizontal. The Relaytor has a laminated core which extends to the frame. Right: R6-B photo from Fred Pearson (Vintage Fredo)



From Kevin Howard of Ballarat Club via Graeme Gulbin. Re-formatted by Peter Bennett. Thanks Guys.

1 Knot = 1.508mph/hour

Beaufort Wind Scale

1 Knot = 1.182Klm/hour

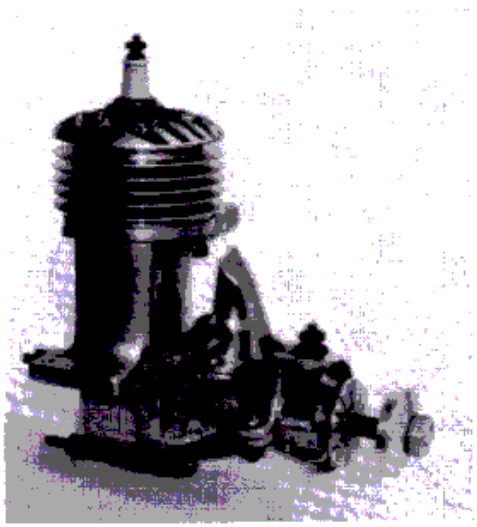
Developed in 1805 by Sir Francis Beaufort, U.K. Royal Navy

1 Knot = 0.5144444 metres/second

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like.	Calm, smoke rises vertically.
1	1-3	Light Air	Scaly ripples, no foam crests.	Smoke drift indicates wind direction, still wind vanes.
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking.	Wind felt on face, leaves rustle, vanes begin to move.
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps.	Leaves and small twigs constantly moving, light flags extended.
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps.	Dust, leaves, and loose paper lifted, small tree branches Move.
5	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray.	Small trees in leaf begin to sway.
6	22-27	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires.
7	28-33	Near Gale	Sea heaps up, waves 13-19 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind.
8	34-40	Gale	Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks.	Twigs breaking off trees, generally impedes progress.
9	41-47	Strong Gale	High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility.	Slight structural damage occurs, slate blows off roofs.
10	48-55	Storm	Very high waves (29-41 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility.	Seldom experienced on land, trees broken or uprooted, "considerable structural damage".
11	56-63	Violent Storm	Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

View From Down Under.

by David Owen.



Jaybee 10cc spark ignition number 20, had many differences to first version.

The Australian Jaybee 10cc Spark &Glow Plug engine circa 1947-49.

Adelaide, the dry and windy capital of South Australia, was a hot-bed of aeromodelling activity in the immediate post-war years. Spurred on by the advent of control line flying, Gordon Burford, Alan McCulloch, Bill Evans and others turned their imagination and talent to the production of model engines to satisfy the growing (Australian wide) demand.

Squadron leader John (Jack) Couper Black, a decorated (Burma 45 Star and pacific Star) RAAF pilot, returned home to his Finsbury Park home in 1946. Jack a well known modeller with many pre-war contest wins to his credit, had proudly completed his service career on Beaufighters in the Pacific campaign. A civilian once more, no doubt contemplating an uncertain future, he decided to join the others and try his hand at building model engines. A locally made Hercules Model A centre lathe, a Sesqui cylinder hone and a Delapena external hone were purchased for the task ahead.

Jack designed a 10cc FRV engine of similar layout to the current and successful American Super Cyclone. His first engine was a spark ignition model. He entered it in the Royal Adelaide Exhibition of late 1947, winning a commendation in "Group XXII, Class 702, Internal Combustion Engines.

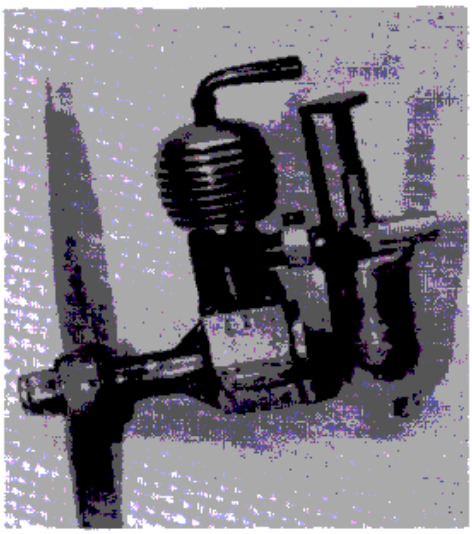
Encouraged by his success, Jack planned a production run of engines and sand-cast , a quantity of cases, front housings, heads and timers. He numbered the cases 1-20 plus. Ray Ardens Glow plug was released in April 1948, before Jack started production in earnest. All subsequent engines, with one exception, were sold as the "JAYBEE 10cc Glow Plug Engine" These often featured in Stunt and "C" Class team race results in the late 40's. Jack made himself one more ignition engine, using case #20. This is the engine depicted and differs from the production Jaybees, with extensive alloy cylinder fins and finned head. He did a lot of flying with this engine, fitting it with an R/C throttle in the mid 70's, when I first knew jim.

Total production of glow engines was only 13x, some earlier numbered cases being subsequently discarded with casting faults or damaged while machining. The glow engine photographed (#19) was very generously passed to my care by an MEW subscriber, Michael Mitchell, to whom I am most grateful. It had an OS nva fitted when I received it and I recognised the original assembly in parts given to me by Jack before his death, after a long illness, at 65 years of age in 1985. Knowing my interest, Jack had endeavoured to complete for me the only Jaybee Diesel, which he had started many years previously.

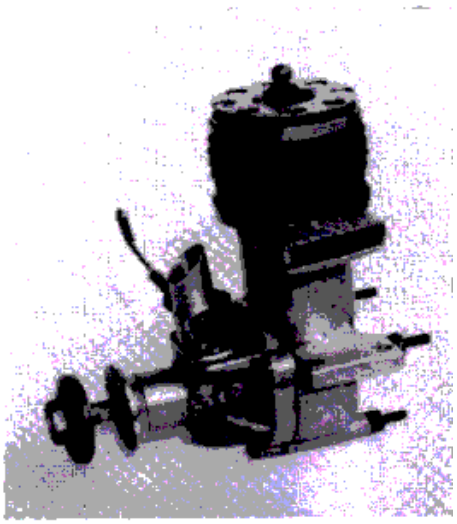
The Jaybee 10cc had a 15/16" bore and a 7/8" stroke and weighed 11.5oz, the only spark version an ounce more. The case hardened chrome nickel steel 1/2" shaft ran in the unbushed front housing, some incorporating a single rear ball bearing, and featured a massive 21/64" crankpin. This was coupled to a generally unbushed rod, which was machined from suitably hard aluminium bar.

The cylinder had very thin integral fins and the squared hole exhaust and transfer ports typical of ringed engines. Earlier engines had cast iron pistons and hardened steel cylinders. Later engines used cast alloy pistons fitted with either one or two cast-iron rings, running in meehanite cylinders. Jack knew how to get the best from the Sesqui and Delapena hones, as the engines had exceptionally well fitted shafts and piston/cylinder assemblies. The cylinders, by the way, were held in Forster fashion, with four and sometimes six screws coming from below the exhaust belt. Eight cheese head screws held the head to the cylinder and three long screws with double nuts were used on the front housing. The venturi and nva was fixed to the flange by two screws.

Jack made his own nva's in steel. The ratchet was a brass decadon running against a beryllium plate clicker and his needle extensions had a characteristic lop-sided wire loop. His two roneod, foolscap pages of typewritten instructions were most informative and included very helpful advice on the operation of these new fangled glow plugs as well as details of suitable props for racing and stunt.



A Kemp Hawk side port of 0.20cc late version, should have an alloy spinner. Photo courtesy of Don Imrie



The Jaybee 10cc glow, most models were similar to this.

While all this was going on, Jack was offered a job by Quantas Empire Airways, and flew Lockheed Constellations on the earliest Kangaroo Route (celebrating its 50th year now) flights to the U.K. He referred to these beautiful aircraft as the best three engined planes in the world and his logs revealed many enforced stop-overs on out-of-the-way landing strips in the Indian Ocean as the result of fires in the Wright turbo compounds.

There was no drama, as the fires were extinguished by automatic systems often without the passengers knowledge. Following an uneventful flight to the nearest replacement engine, they were told that there would be a delay whilst minor repairs were undertaken, and relaxed mostly unaware of the feverish activity taking place swapping power pods! Jack Black went on to fly as Captain on Super Connies, DC-6's and 7's and later on, Caravelles and 707's for Swissair.

The Kemp "K" Engines of Gravesend, Kent.

Harry Kemp's "K" Engineering Company produced a large 4.4cc diesel in 1947, of side port design, it used magnesium extensively and was painted or coloured black. In 1948, Kemp introduced a side port 1cc Eagle diesel, following this later in that year with the front rotary valve Eagle Mk2. This new engine was advertised in the December 1948 Model Engineer at 37/6 and a kit form version was offered at a saving of 10/-, requiring only the lapping of crankshaft to main bearing.

The same advertisement offered the 5cc Vulture, claiming it was "the fastest, lightest and most powerful 5cc made" and "worth double" the 79/6 asked. Three versions of the Vulture are known, being distinguished by detail differences only. The basic engine was built on a very light die-cast and tumble finished crankcase, which featured Anderson Spitfire styled webs on its under surface and an alarming unsupported section between the venturi boss and the cylinder section.

Highlights from the 2018 Eastern States Gas Champs at Wangaratta.

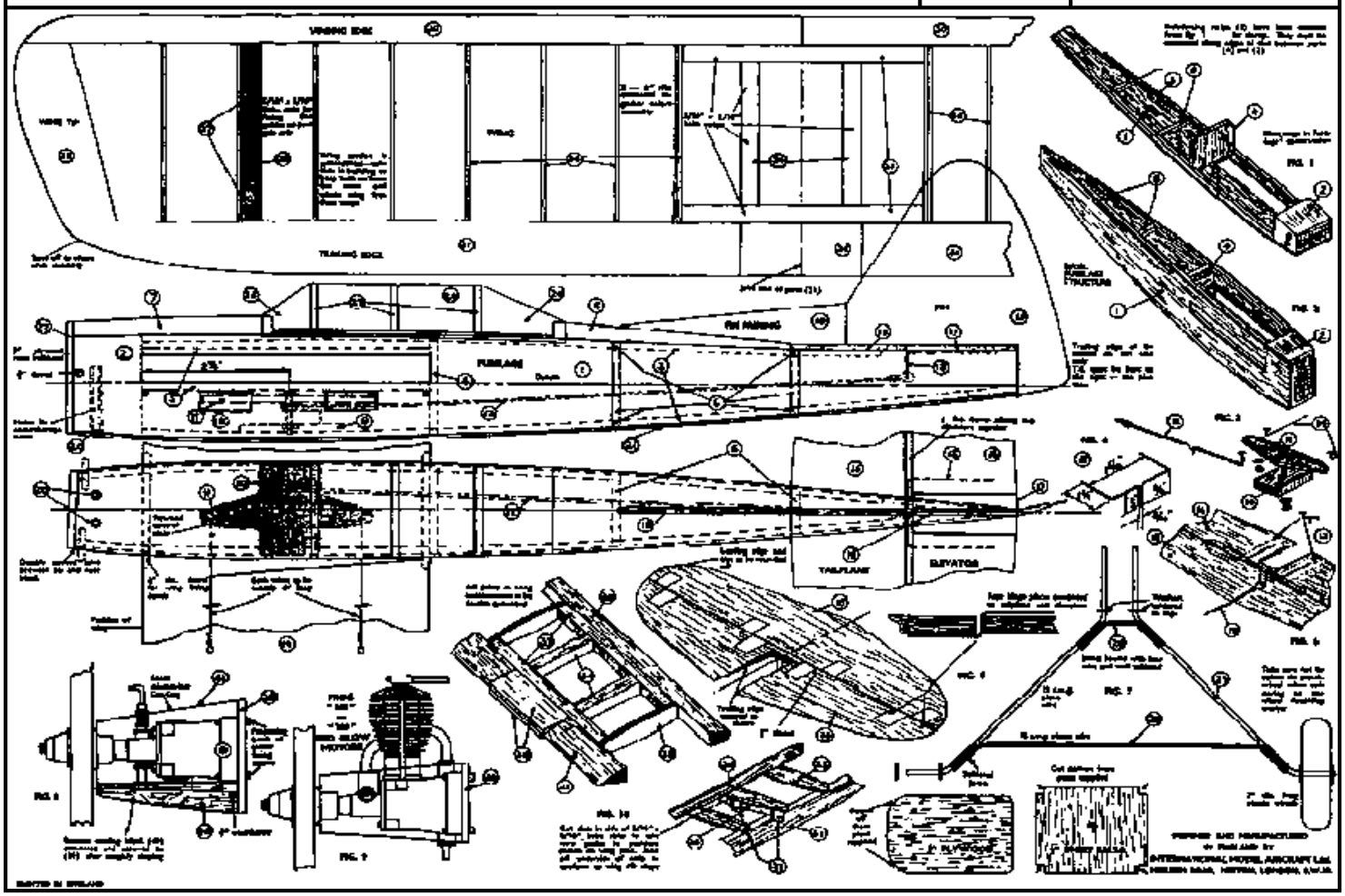
All photos courtesy Karen Paton.

Above '38 Antique models of Steve Gullock and Kevin Fryer at the ready. Below Winners in '38 Antique, Dave Paton (Qld) 1st, Steve Gullock 3rd and Keven Fryer 2nd.
Right Bomber trying for the sandpit, perhaps someone mentioned Electric Texaco in its presence?

Above: *Texaco winners at ESGC Wangaratta 3rd Dave Paton (Qld) 1st Peter van de Waterbeemd (NSW) and 2nd Kevin Fryer (Vic)*
Below: *Duration flyers, result not known at this time.* Bottom: *Winners in Electric ½A Texaco 3rd Steve Gullock, 1st Kevin Fryer and 2nd Robert Taylor, all from SAM 600.*

THE FROG "VANDIVER" FULLY AEROBATIC CONTROL-LINE MODEL

DESIGNED FOR THE FROG "108" OR "160" "RED GLOW" DIESEL & GLOW PLUG MOTORS



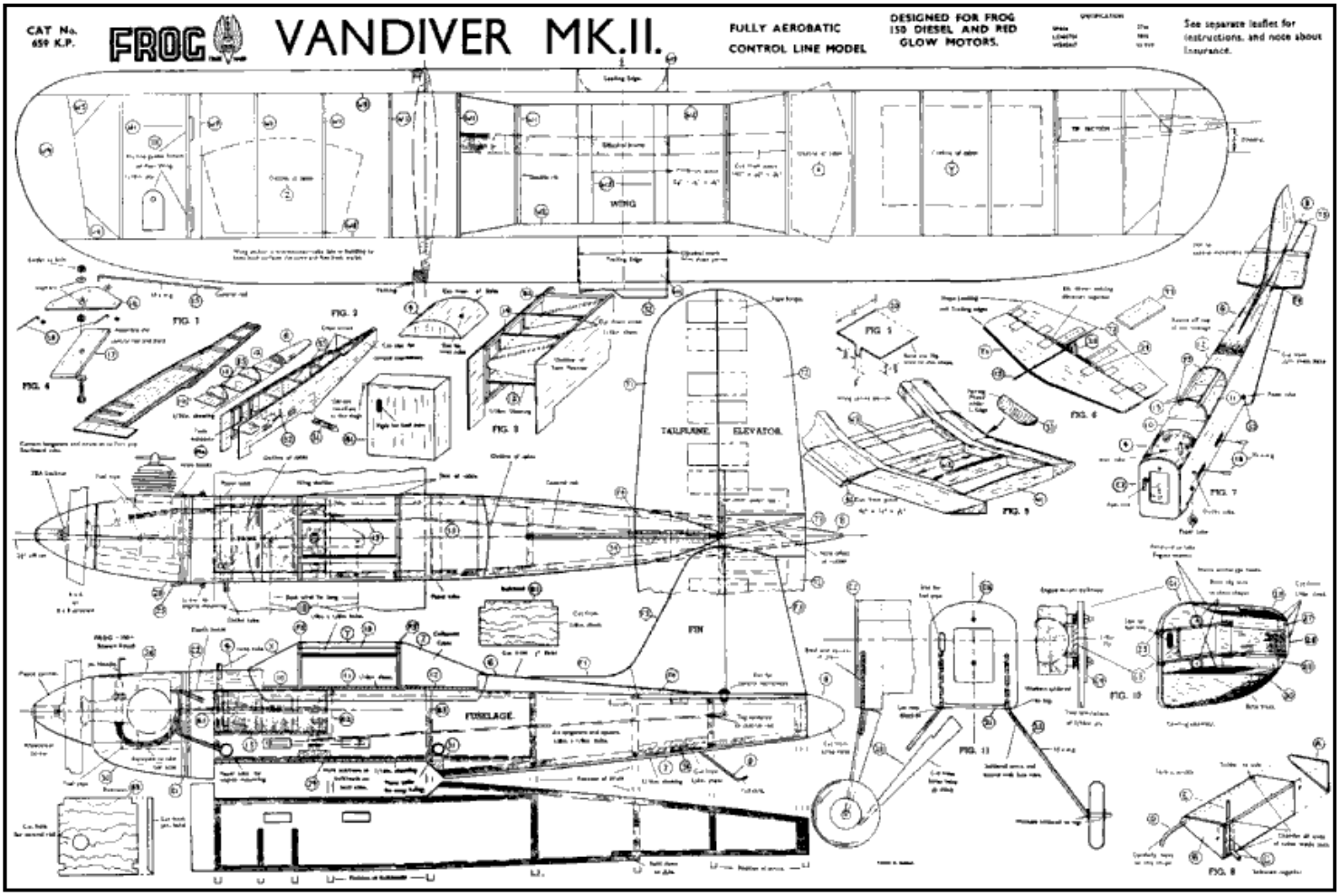
CAT No. 659 K.P.

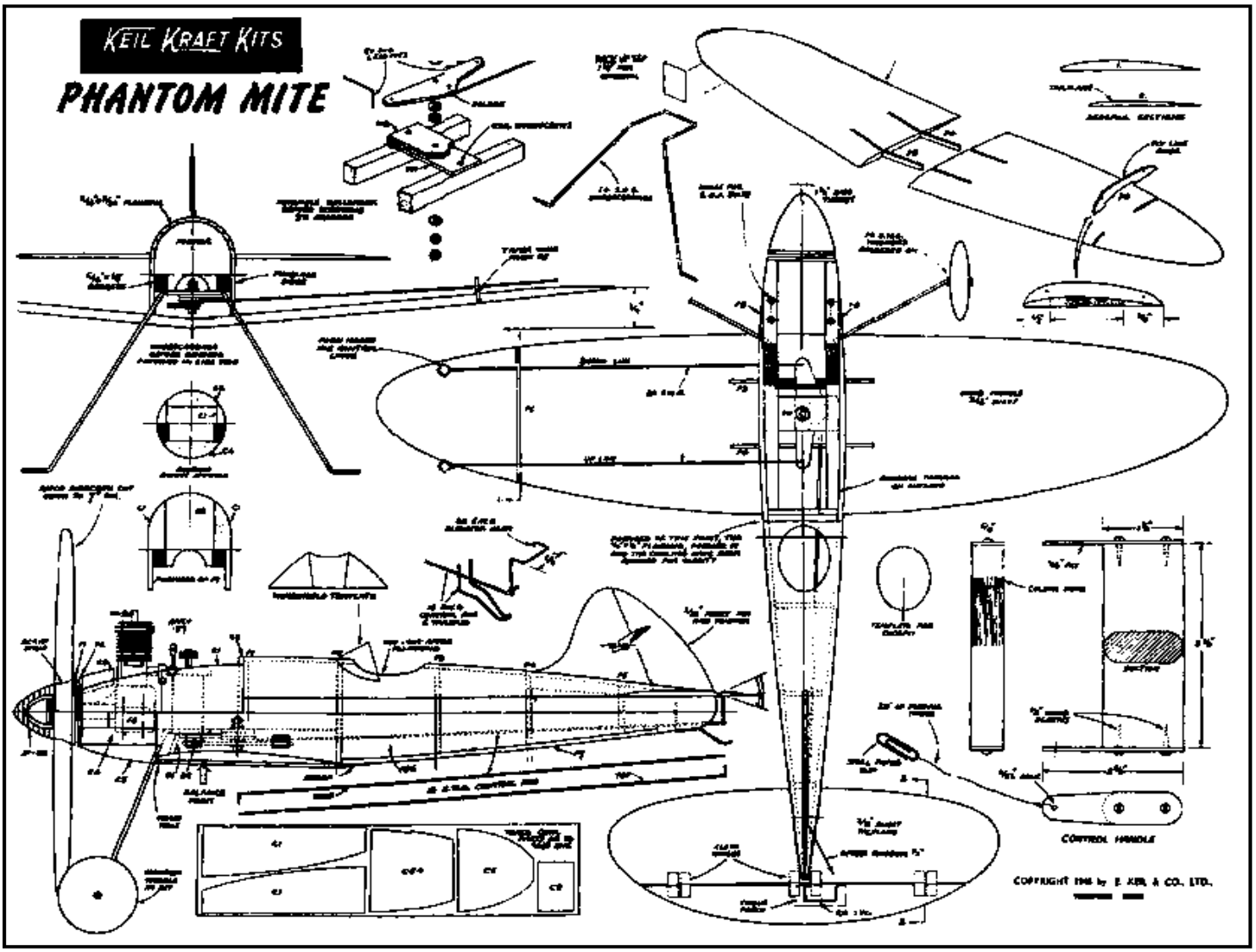
FROG VANDIVER MK.II.

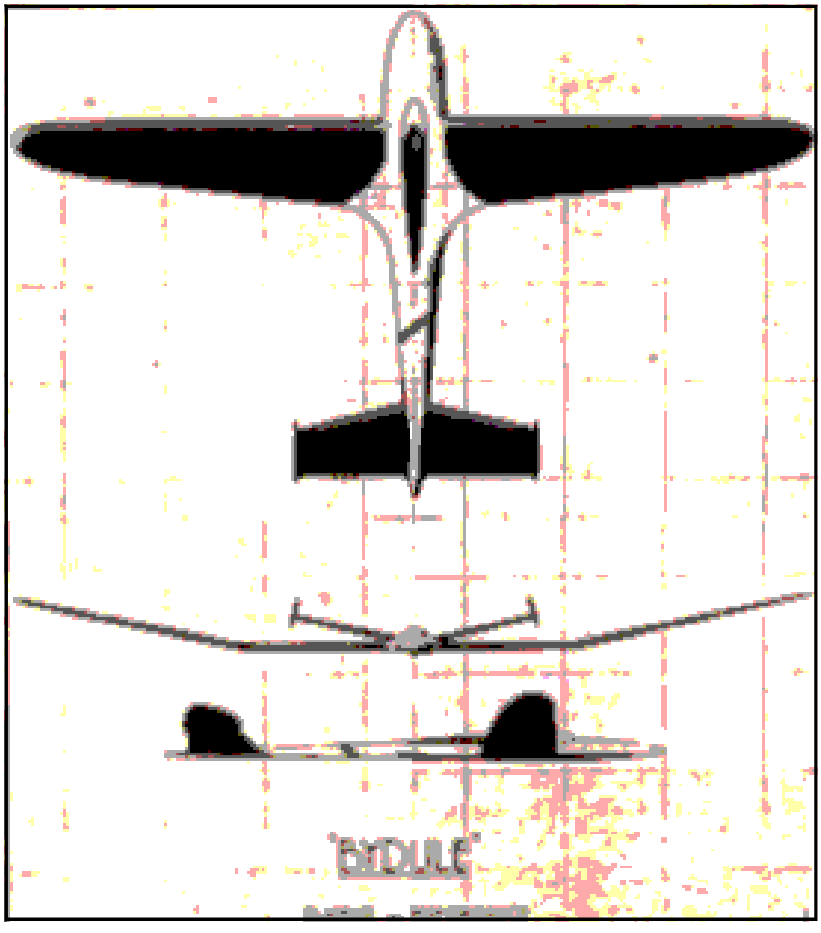
FULLY AEROBATIC CONTROL LINE MODEL

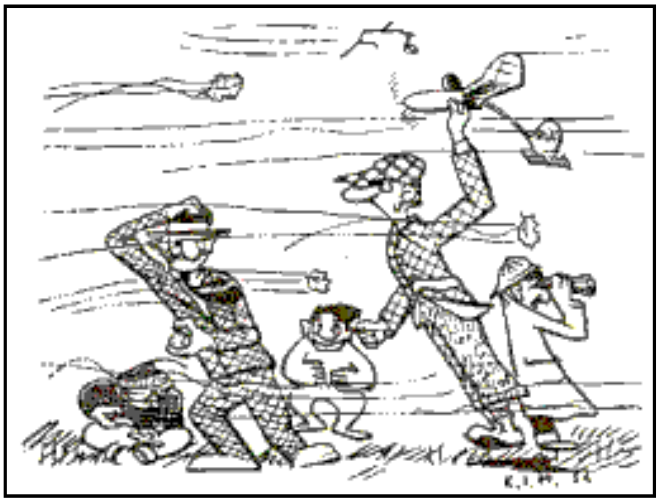
DESIGNED FOR FROG 150 DIESEL AND RED GLOW MOTORS.

See separate leaflet for instructions, and note about insurance.









TRIVIA

The first canned dog food in America was created to dispose of excess?

Lobsters	Chicken
Horses	Deer

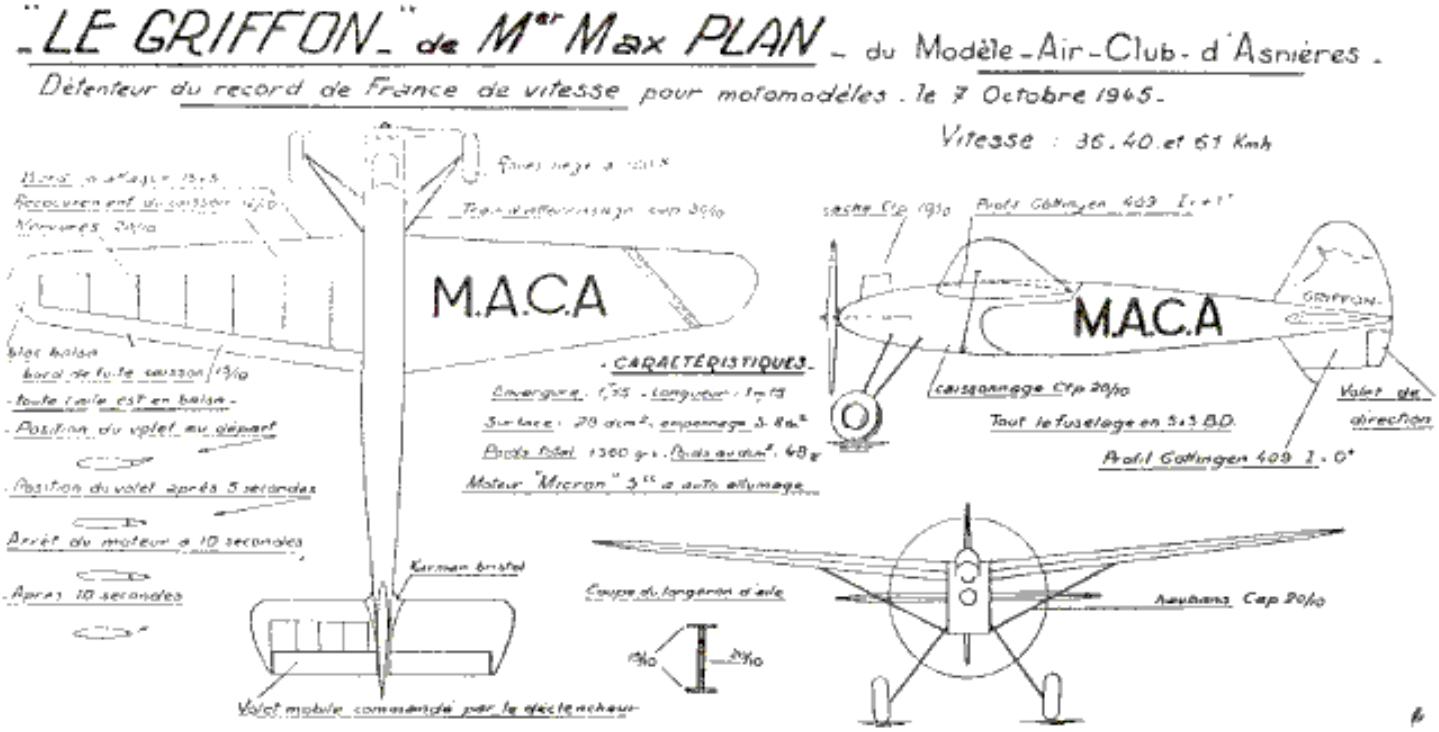
Answer ⟶

Answer: Horses

Once upon a time, we relied heavily on horses, but now we rely on cars even more. If you've ever stopped to ponder such radical shifts in history, you may have asked yourself, "But… what happened to all the horses?" Some of them were lost in war efforts (right around the rise of the automobile, the United States sent over a million horses to fight in Europe), some were simply sent out to pasture land, but a huge portion of surplus horses in America were turned into the first canned dog food.

Introduced in 1922 by the Chappel brothers in Rockford, Illinois, Ken-L-Ration (a play on the well-known K-rations issued by the military) was primarily horse meat, along with some vitamins and filler. While the business started as a means to dispose of horses no longer needed for commerce or military purposes, the canned dog food business proved so successful that within a decade, the brothers were raising and slaughtering 50,000 horses a year for the sole purpose of creating more dog food. The business continued to be so successful, the Chappels sold it for a tidy sum to Quaker Oats.

Eventually, and perhaps somewhat ironically, the gears of war turned again and put an end to the horse-meat-as-canned-dog-food business. Just as World War I had ushered in the obsolescence of the horse and kicked off the horse-meat business, World War II's tin and meat rationing put an end to canned dog meat (and in turn gave rise to the dry kibble industry). *Image courtesy of Quaker Oats.*



Two world speed records in motomodele V.L. : ***July 23, 1939: 55.836 km / h. Alime Yalitchev (USSR)***
June 25, 1973: 173.45 km / h. Doubenitsky (URRS)

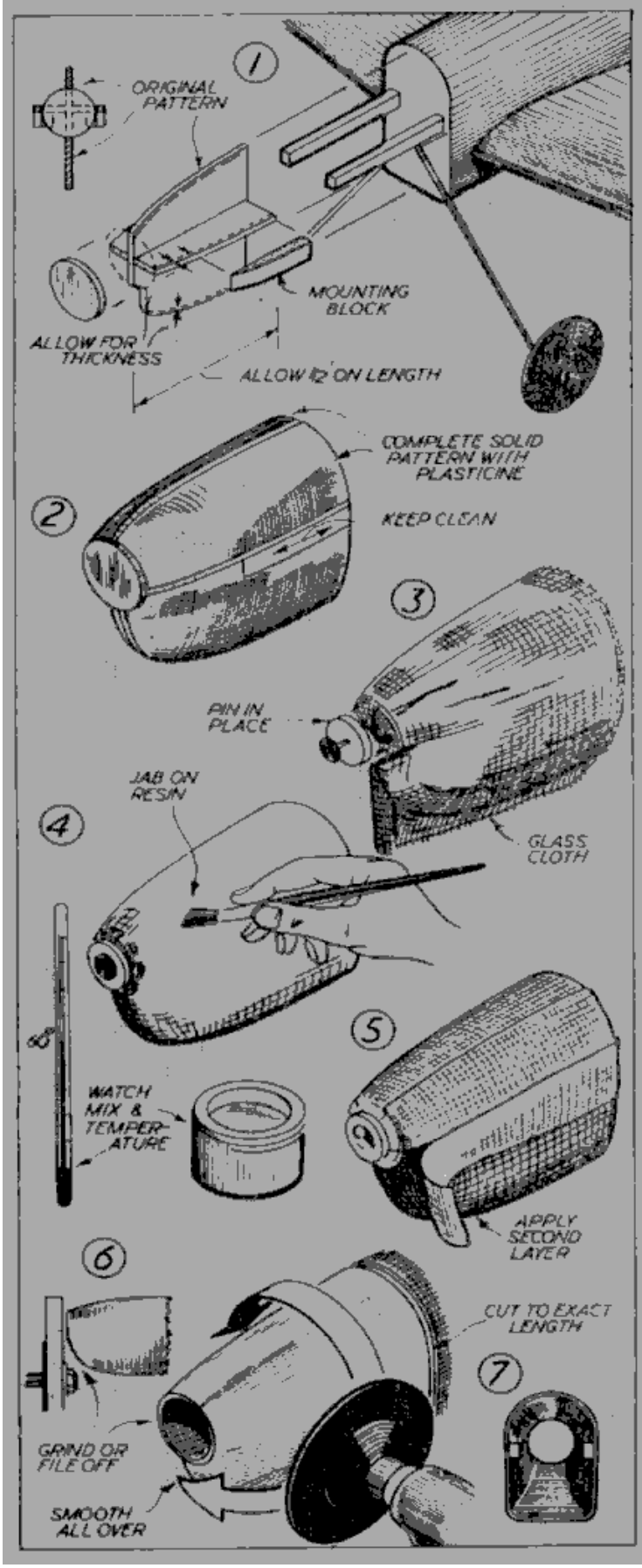
She's single... She lives right across the street and I can see her place from my kitchen window! I watched as she got home from work this evening. I was surprised when she walked across the street, up my driveway and knocked on the door! I opened the door, she looked at me and said: "I just got home, and I have this strong urge to go dancing and drinking, and maybe fool around a little....you know, have some fun. Are you doing anything tonight?" I quickly replied: "Nope, I'm free!" "Great!" she said. "Can you look after my dog ?"
Being a senior citizen, really sucks!!

\- - - - -

Thinking back a few years, visiting our friends in Fla., I remember Hurricane Matthew. We were ready for it but my wife was not. When the wind reached a screaming pitch with the trees snapping and thrashing, the horizontal streaming rain, flying roofing iron and destroyed fences as well as the unnerving sound-levels, my wife was rooted to the spot. She stared and stared through the glass of the window. Immovable, with her nose pressed to the window-pane, the stark fear in her eyes will stay with me forever.
Fortunately, as the eye of the storm arrived and the winds temporarily lessened, I was able to open the sliding door and let her in.

September, 1956 465 AERO MODELLER

Aeromodelling *Step - by - Step*



FIBREGLASS is a ubiquitous material which can be moulded or formed in many ways. To be produced as shell mouldings it has to be laid on or in suitable shaped patterns or moulds. Laying *in* a "female" mould is best for getting a smooth outer surface provided the mould face is finished glass smooth. Building up around a "male" pattern is generally easier and more suitable for one-off jobs, like cowlings. The outer surface of the moulded shell is then rather rough and requires smoothing down to finish.

The pattern can be made in a variety of ways. A straightforward method is to lay out the side and plan shapes required on sheet balsa and assemble these cruciform fashion **1**. A hardwood mounting block can be attached to the pattern, which in the finished moulding will be bonded to the shell and give a fixing point aligned with the side of the bearers. A disc is added to the front of the basic pattern as a guide to nose section. Allowance should be made for the thickness of the shell (allow .008 in. per layer of cloth and .004 in. per layer of tape). Also make the pattern slightly longer than the actual cowling length to allow for trimming off the ends.

A solid pattern is then very quickly completed around this basic assembly by filling in with plasticine and moulding and smoothing to final shape **2**. Compound curves can easily be moulded in this way if required. When finished, clean off any plasticine on the outer face of the mounting blocks.

The resin-hardener mix should be prepared at this stage. Coat the faces of the mounting blocks with resin and then lay on glass cloth cut to suitable size to completely cover the pattern **3**. The cloth is sufficiently "mouldable" to form to shape by pressure. It will generally be a great help if the pieces turned around the front edge of the pattern are trapped by a small disc of wood pinned in place.

When satisfied with the lay of the cloth, jab on resin all over to completely impregnate the cloth, using a stiff brush **4**. Do not try to *brush* the resin in, otherwise you will pull the cloth layer out of shape. If necessary, rearrange parts of the layer to bed down on the pattern smoothly.

Another layer of cloth should then be laid on, applied and pressed down whilst the resin is still fluid. Coat this also with a further layer of resin. For the outer skin a final layer of glass *tape* strips will give a smoother finished surface **5**.

The moulding should then be left to set twenty minutes minimum to an hour or more, depending on the amount of catalyst added to the resin and the temperature. Catalyst proportions are not critical, so err on the generous side if anything. But make sure that the temperature at which the moulding is left to dry is at least 60 degrees. The warmer the temperatures the quicker the moulding will set.

When set, simply dig out the plasticine and pull or break out the balsa pattern, leaving only the mounting blocks bonded to the shell. The last traces of plasticine can be washed off the inside with petrol.

The cleanest way to finish off the front is to hold it against the edge of a grinding wheel **6**. The rear edge is cut to exact length with a hacksaw **7**. Smoothing the outer surface is best done with a fine abrasive disc mounted on an electric drill. You can, if you like, apply a coating of "trowelling filler", made by mixing talc with a resin catalyst mixture to the consistency of a thick paste. Apply with a knife blade to fill all the hollows (all over if you like) and smooth off clean. Finish with abrasive when set, as before.

From Mike Myers mikemyersgln@charter.net via SAMTalk

I started modelling again some 35 years ago - and have used (and worn out) a lot of Dremel tools along the way. My primary uses for Dremels have been wire cutting and some primitive sort of routing and sanding. I say primitive because the Dremel is a bit bulky for hand eye co-ordination and fine motor control.

Recently the family of a deceased modeller gave me an old Dremel tool with a non-working flex shaft attachment on it. I could see that the fellow had built some nice models (I was also given an old Dremel tool with a right angle drive attachment).

I was curious about the flex shaft, and since you can buy a Dremel flex shaft attachment for less than $25 on Amazon (or at the hardware store) I gave it a whirl and bought one.

You get a 36 inch or so flexible shaft that terminates in something like a dentist's hand piece. I used it for the first time today. I'm smacking my forehead as to why I didn't get it sooner. I had glued pieces of 1/4" thick balsa on the wingtips of a plane I was framing up. The airfoil had a heavy under-camber. I like to sand things to shape to fair in to the wing. It would have taken 20 minutes or more to do that by hand - and less than 2 minutes to get the job done with the flex shaft and a little sanding drum. This tool makes balsa dust in a small place in a hurry.

The shaft is very flexible. You need to grease it about every twenty five hours of operation. Dremel says don't bend the shaft in a curve less than 6" radius. I've got a pegboard wall behind my work bench so I just hung the Dremel tool (motor) up on the pegboard on a hook and let the flex shaft and handpiece dangle down.

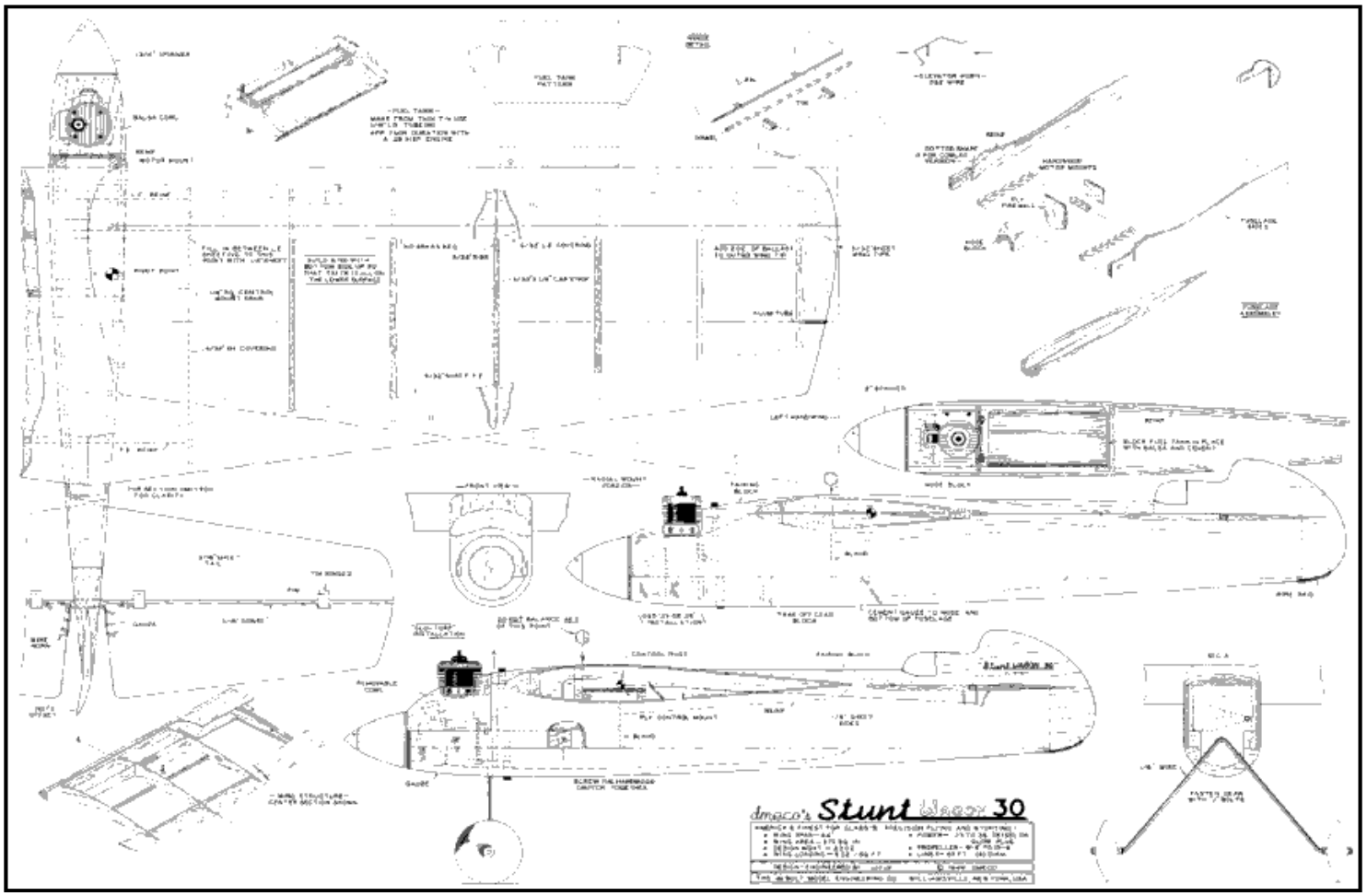
I was using a little Dremel drum sander implement - around $\frac{3}{4}$ inch of so O.D. - the standard little Dremel drum sander. The handpiece has a collet and a clamping nut that you tighten with your fingers. As I recall, the flex shaft came with a couple of different collet sizes which fit in the hand piece. Since virtually every Dremel tool, grinder, sander, cutting wheel etc. uses the 1/8" shaft, I'll probably never change the collet in the handpiece.

The only downside of it all is that, while it's easy to attach the flex shaft to the Dremel tool, you'll probably just want to leave it on one of your Dremel tools. There are a couple of other Dremel style attachments - their little shaper table, and Stew Mac's precision router which also tend to have a dedicated Dremel tool motor attached. But over the years I gradually switched to a battery operated Dremel tool, which left me a couple of corded Dremel tools to hand - so I used one of those "spares" for the flex shaft.

I hang the Dremel on a hook on a wall above the workbench. There are a lot of sanding or cutting jobs where I would not or could not use the stock Dremel tool, but where the flex shaft attachment works just fine.

If you are a tool "junkie" and even if you're not, you ought to try that Dremel flex shaft attachment.

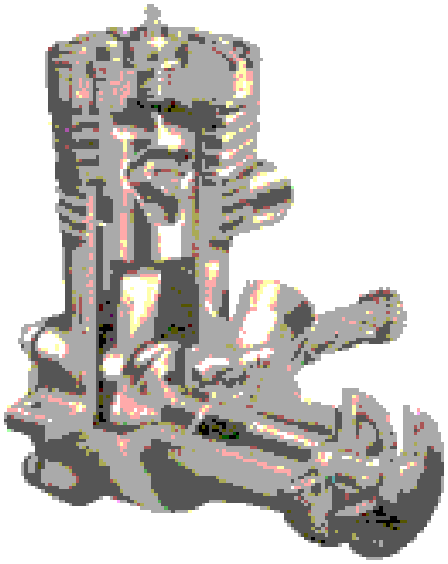
Mike Myers



The 3.27 c.c. Sabre .19 from Model Aircraft March 1954

The Sabre .19 and Sabre .49 glow-plug engines are the most recent additions to this well-known range of Australian motors which were formerly marketed under the name "Gee-Bee." The .49 model appeared a little over a year ago and was followed. Last season, by the .19 and to enable available manufacturing facilities to be concentrated on these two models (for which there was an appreciable demand) production of the Sabre 150 and 250 diesels already tested in this series) was suspended. The engine with which we are dealing this month is the Sabre .19 which, as its name suggests, is of 0.19 cu. in. capacity, or 3.27 c.c. To those who read these test reports regularly it will be immediately apparent that this model closely resembles, both in design and appearance, the K. & B. Torpedo .19 engine which was the subject of Engine Test No. 53, in our November, 1953, issue.

The use of an established and successful design as a basis for a new model is by no means an unusual practice among model engine manufacturers, but this is generally disguised by a few subtle alterations to the external shape. The manufacturer of the Sabre has resorted to no such deception. The .19 clearly proclaims itself as being based on the Torpedo .19—even to the wording of the instruction leaflet which accompanies it! Imitation, we are told, is the sincerest form of flattery. Certainly, few engines have more richly deserved the flattery of being imitated than the Torpedo .19 and it is not surprising, therefore, to find that the Sabre is superior in output to all engines in the 0.19 cu. in. and 3.5 c.c. classes so far tested in this series, with the sole exception of the K. & B. Torpedo .19 itself.



As received, the test Sabre .19 had obviously acquired some running time, but it was not known how much this amounted to and an additional 30 min. were therefore given before the torque and r.p.m. checks were made. The glow-plug fitted to the engine, although not new, appeared to be in good condition and was of the long reach type but equipped with two copper washers. After some performance checks, it was found that a slight improvement was obtained by omitting one of these washers, however.

The Sabre .19 is soundly made and well finished The die castings are not polished as is the popular trend in America, but they are clean and smooth and impart a good appearance to the engine.

Specification

Type: Single cylinder, air cooled, two-stroke cycle, glow-plug ignition. Shaft type rotary valve with rectangular intake port. No supplementary air induction. Flat crown lapped piston with straight baffle.

Swept Volume: 0.1994 cu. in. (3.27 c.c.).

Bore : 0.640 in. Stroke: 0.620 in

Stroke/Bore Ratio : 0.969 : 1.

Weight : 6 oz.

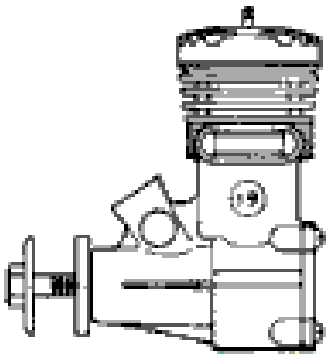
General Structural Data : Die-cast aluminium alloy crankcase, rear cover and cylinder head. Rear cover secured to crankcase with four machine screws. Machined steel cylinder with integral turned fins Cylinder and head secured with six machine screws, four of which pass through into crankcase casting. Lightweight lapped c.i. piston. Die-cast dural connecting-rod. Tubular steel gudgeon-pin with aluminium end-path. Counterbalanced crankshaft, machined in one piece and running in bronze main bearing. Steel drive plate and prop washer. Replaceable airscrew stud. Beam type mounting lugs. Spray-bar type needle-valve.

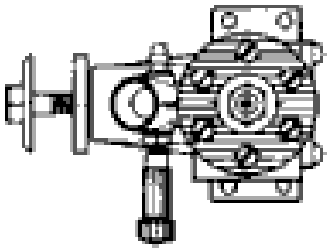
Test Engine Data

Fuel used: 42 per cent. Blending methanol ; 30 per cent. D B H. nitromethane; 28 per cent. Castrol "M" ignition equipment used : Maker's glow-plug. 1.6 V to start.

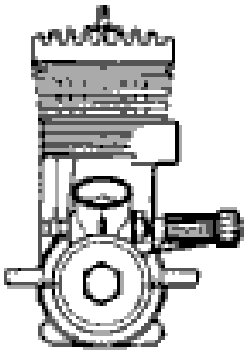
Performance

The Sabre instruction leaflet specifies a fuel mixture of 75 per cent. methanol and a 25 per cent castor oil. This suggestion of a "non-nitro" blend is probably because nitro-methane and similar compounds are even less readily obtainable to Australians than to residents of the United Kingdom. However, it was obvious that the Sabre would gain much from the use of a nitrated fuel and since most of our previous tests on high performance glow-plug engines have been conducted using these fuels, it was felt that it would be fairer to use such a blend also for our tests on the Sabre. To start the Sabre we found that a standard procedure sufficed. This consisted of choking the intake and flicking over the prop until fuel was seen to reach the carburettor, giving three more choked flicks, priming with a few drops of raw fuel on the piston crown, connecting the battery and flicking to start. The instruction leaflet called for 4-7 turns open for the needle valve. A brief check, by blowing through the spray-bar via a piece of Neoprene tube, had indicated that the lower figure would be adequate and we found that the running setting was approximately 2 turns open.





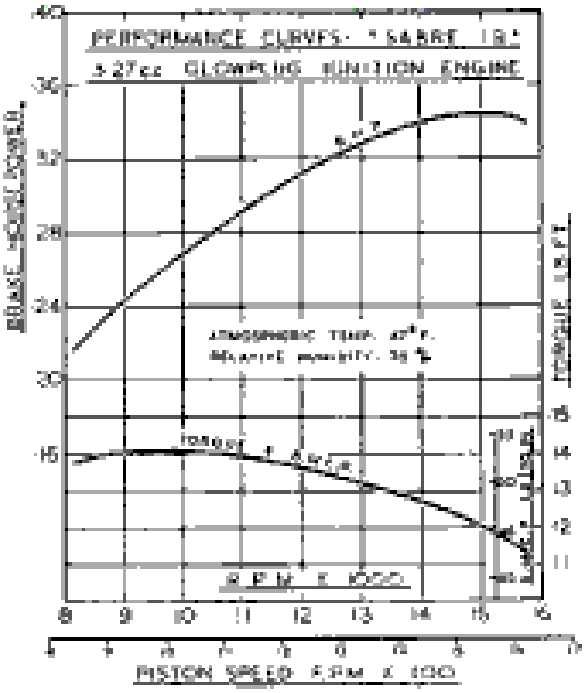
Actually, the Sabre is not in the least "finicky" about starting procedure and, when re-starting a warm engine, as, for example, after re-fuelling following a run, it bursts into life again instantly after a couple of choked flicks and, of course, without any need of readjusting the needle setting. Although the Sabre had every indication of being adequately run in before the torque tests were undertaken, there was, after the engine had warmed up, a slight dropping off of power when loaded for speeds much below 11,12,000 r.p.m. The engine is obviously happier at the higher speeds and five figure rpm. should certainly be aimed for at all times by avoiding the use of airscrews of excessive diameter or pitch. We would suggest 10 X 5 (free-flight) and 9 X 6 (C.L.) as the largest practical prop sizes for use with this engine. To release greater power, somewhat smaller sizes are called for, such as 9 X 4 and 8 X 6. Between 12,000 and 15,000 r.p.m. the engine is particularly even running and vibration free.

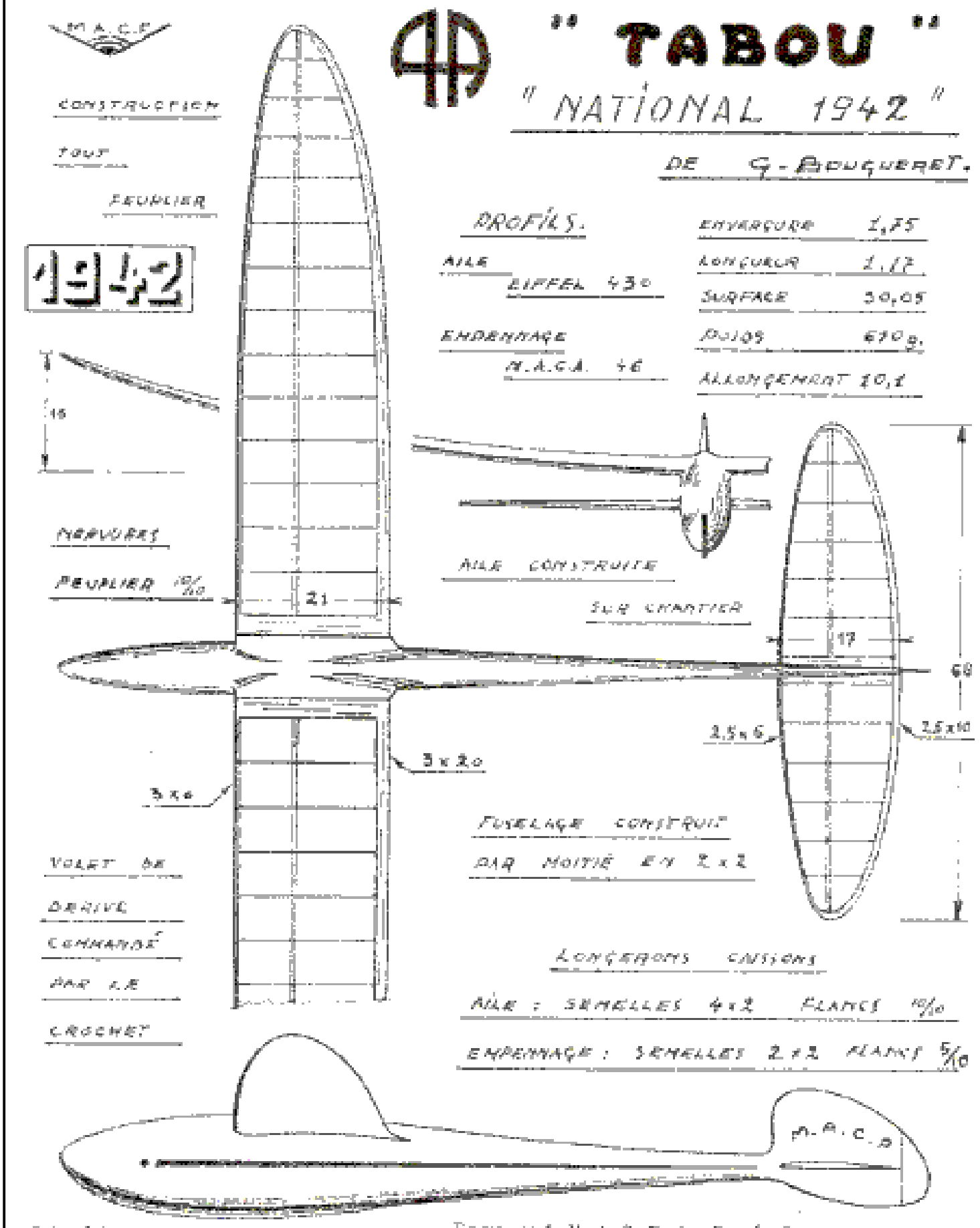


The highest torque readings were recorded at around 10,000 r.p.m. and the equivalent b.m.e.p. was 53 lb./sq. in., which is a very good figure. Beyond this point the torque curve declines without any sudden drop and the result of this is that the peak power is reached at some 15,000 r.p.m. where nearly 0.35 b.h.p. was indicated.

Power/Weight Ratio: (as tested) 0.93 b.h.p./lb.

Specific Output: (as tested)106 b.h.p./litre.





Ech: 1/9,8

Document V. A. C. P. de René Jossien

G.B

Un plan de Georges BOUGUERET est toujours un régal des yeux. Voyez ce joli planeur ! Quant aux qualités de vol de ses modèles, un seul mot, la Classe.

Contest Calendar 2018

SAM 600 Australia
Victorian Old Timers Association Inc.
10 Cunningham Drive
Endeavour Hills
Vic 3802

Contests commence at 9 am, unless otherwise stated.

The 2017 MAAA Rules apply

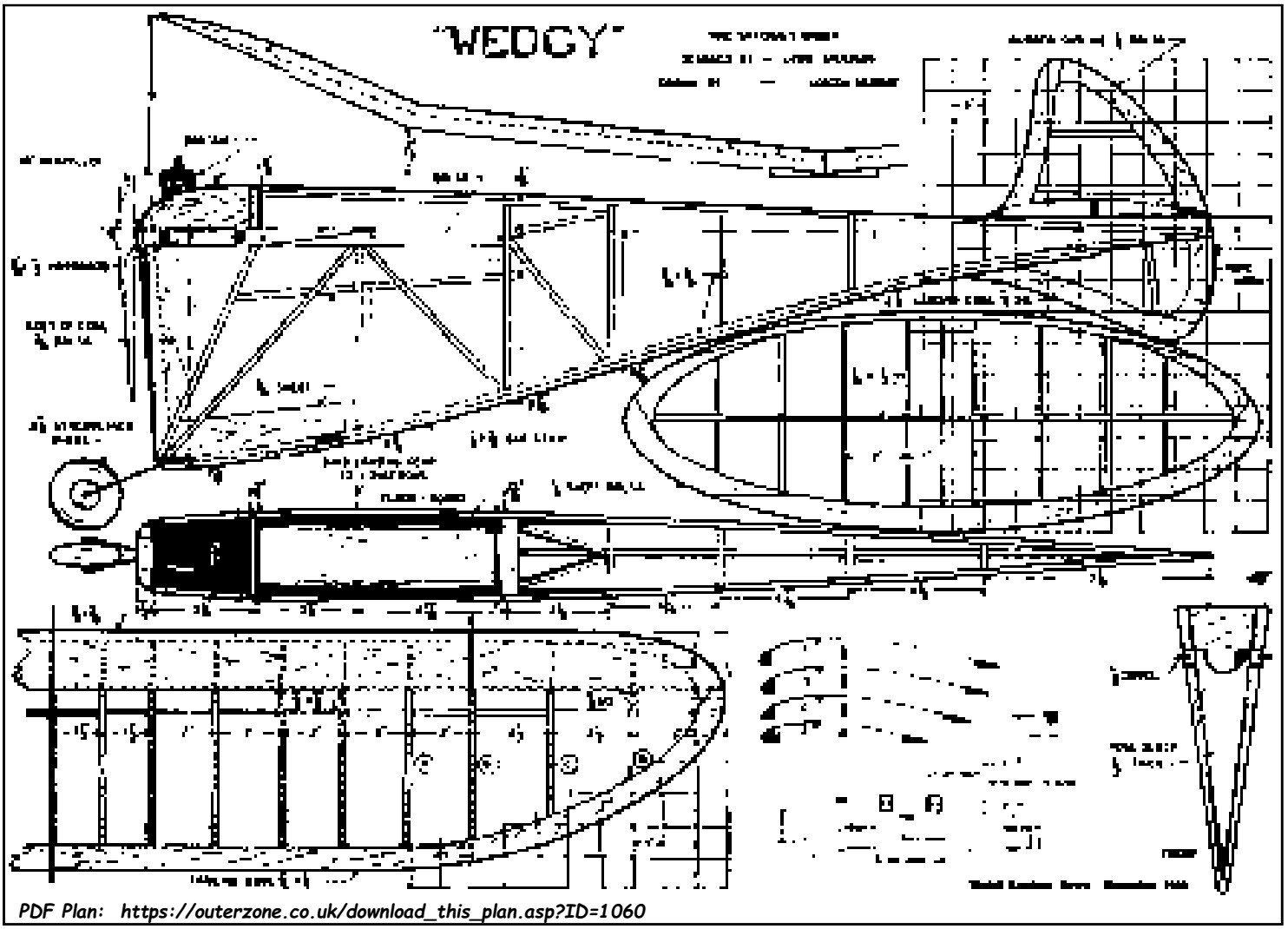
Climb & Glide in brackets will be flown only if time permits

The CD for all SAM600 events will be nominated on the day of the event

General Meeting Echuca 8.30am March 18th / AGM Echuca 8.30am September 16th

All 1/2A, Duration &Texaco events will have the electric equivalent (except State Champs & Nats)

November 10th & 11th	**COHUNA** Saturday: 1/2A Texaco, Duration, Burford Sunday: Texaco, 38 Antique { Climb & Glide }
November 25th	**BALLARAT (new field)** 1/2A Texaco, Climb & Glide, Texaco



PDF Plan: https://outerzone.co.uk/download_this_plan.asp?ID=1060

From Larry Davison samchamp@jetbroadband.com
July 6,2018.

SAD NEWS: My dear lifelong friend, Leon Shulman went to the big thermal in the sky. Will sorely miss Leon. He was 98 years young!